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SAN ISABEL NATIONAL FOREST

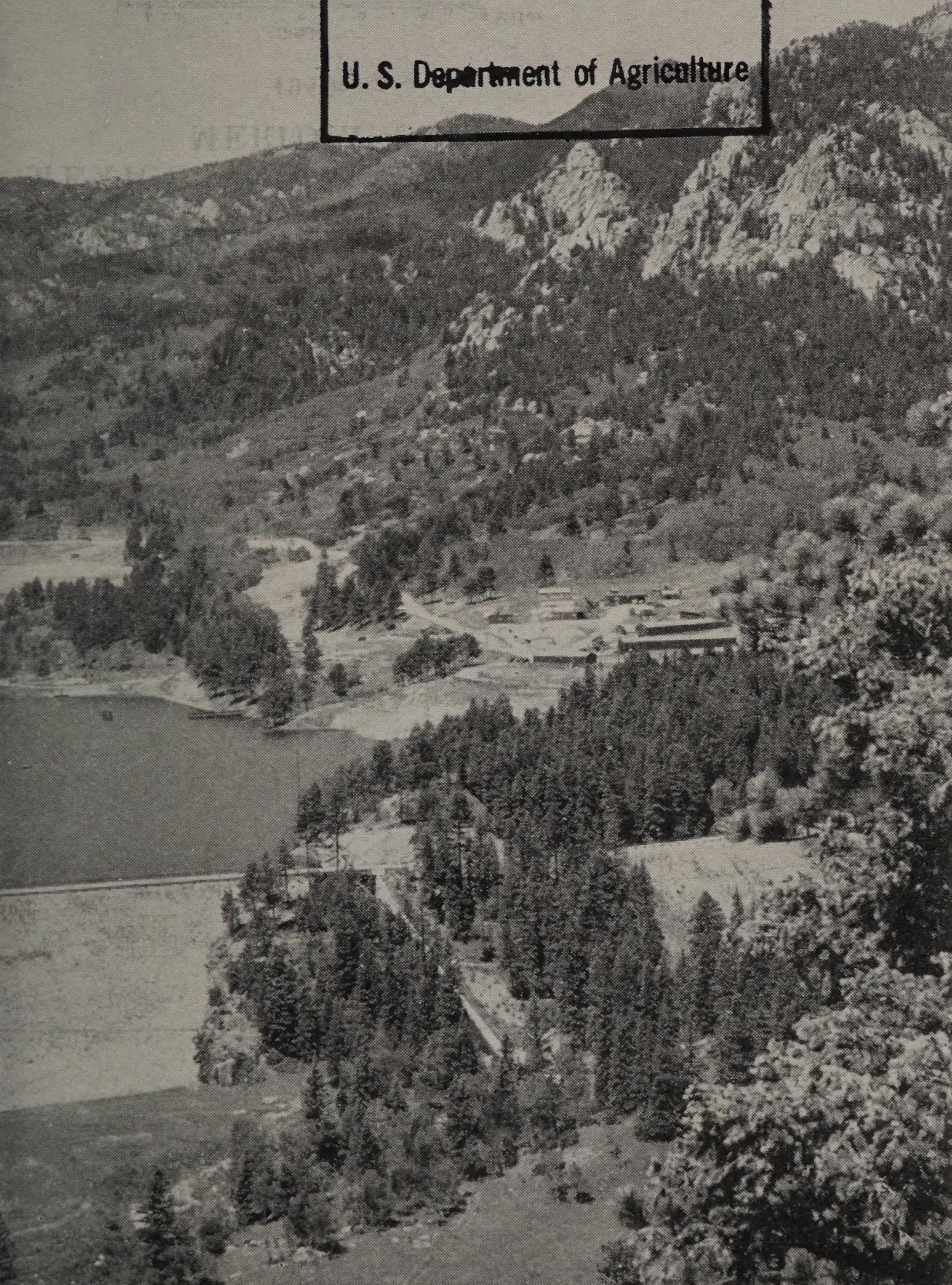
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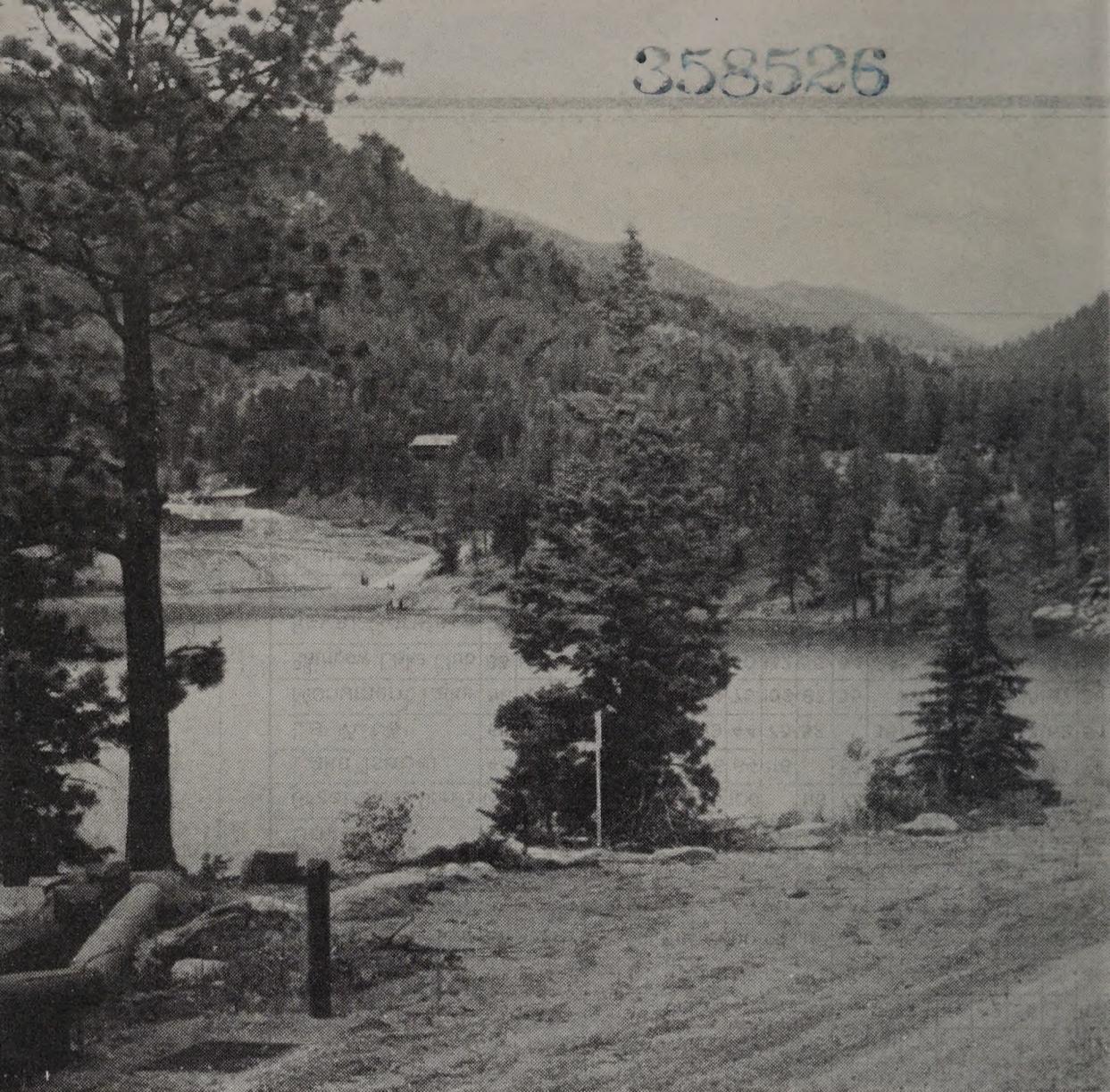


St. Charles Dam and Lake Isabel

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U. S. DEPARTMENT OF AGRICULTURE
U. S. FOREST SERVICE

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Good roads, such as the Greenhorn Fores

Location . . . Name

Travel Routes.

Pueblo, second largest city in Colorado, is the gateway to the San Isabel National Forest and headquarters for the forest supervisor. It may be reached by plane over the Continental Air Lines; by rail over the Colorado and Southern, the Missouri Pacific, the Santa Fe, and the Denver and Rio Grande Western Railroads; and by auto or bus over U S 85-87, the main north-south route, and U S 50, the principal east-west highway.

U S 85-87 extends along the east side of the forest, U S 50 along the north, U S 285 along the west, and U S 160 passes near the southern limits. From these routes, State, county, and Forest Service roads branch into the forest from several points. These roads lead to improved camp sites in the forest, where camping and picnicking may be comfortably enjoyed. From these roads and campgrounds many forest trails may be followed to the wilder and more picturesque parts of the forest by those seeking more primitive conditions. About 610 miles of trails, most of which are in the Sangre de Cristo Division, are available to foot or horseback travelers. The 53-mile Rainbow Trail, which parallels the east boundary of the division, is a pleasant route at low elevations, from which side trails extend into the mountains, sometimes reaching the crest of the range, where wonderful vistas of the surrounding country may be obtained.

In South Central Colorado.

The San Isabel National Forest is located in south central Colorado, along the front ranges of the Rocky Mountains, and is entirely separated from the main Continental Divide. Extending from the Arkansas River on the north to within 15 miles of the Colorado-New Mexico boundary on the south, it includes 660,776 acres, of which 42,769 are private- or State-owned land.

The forest is divided by the Wet Mountain and Huerfano River Valleys and the Sangre de Cristo Land Grant into three major divisions, which were withdrawn originally as separate forest reserves, under the names—San Isabel, Wet Mountain, and Las Animas.



highway, lead into and traverse the forest.

F-397684

... Travel Routes

Named for a Queen.

When these areas were united as one national forest, the name San Isabel was retained. It is a pleasant sounding, easily spoken contraction of "Santa Ysabel," and goes back to Queen Isabella of Spain, sponsor of Columbus and beloved patron saint of Spanish speaking settlers of that part of Colorado in which the forest lies. San Isabel Creek, within the first small area withdrawn in the Sangre de Cristo Range, gave the name to the forest.

Rules for Health Protection

1. PURIFICATION.—Mountain streams will not purify themselves in a few hundred feet. Boil or chlorinate all suspected water.
2. GARBAGE.—Burn all paper, old clothing, or rubbish. Bury or place in pits or receptacles provided, all garbage, tin cans, bottles, and other refuse.
3. WASHING.—Do not wash soiled clothing or utensils or bathe in springs, streams, or lakes. Use a container and throw dirty water where it cannot get into the water supply without first filtering through the ground.
4. SANITARY PRECAUTIONS.—Use public toilets if they are available. Where not provided, bury one foot deep all human excrement, at least 200 feet from water.
5. OBEYING LAWS.—Observe the rules of sanitation and protect yourself and others. Report all insanitary conditions to the nearest health or forest officer.

Natural Divisions

As **SUBDIVIDED**, the forest areas are now known as the Sangre de Cristo, Wet Mountain, and Spanish Peaks Divisions, and in and about them many interesting stories and legends persist concerning the life of the Indians and the explorations of the Spaniards. For example, there is a fairly authentic record of the expedition of Juan de Anza, in 1779, and his pursuit of depredatory Comanches from the vicinity of Santa Fe to the Greenhorn Mountains. After his battle with the Indians he crossed the Sangre de Cristo Range on his homeward journey.

Also there are the recorded explorations of Lt. Zebulon M. Pike and other American pioneers into the forest several decades later. Pike crossed the Sangre de Cristo Range during the winter of 1807. He raised the American flag on or in the vicinity of the pass he crossed, the first flag of this Nation to fly over Colorado soil. Later, Spanish army officers arrested him as a trespasser on their territory and took him to Santa Fe for trial.

In 1848, Capt. John C. Fremont crossed the Sangre de Cristo Range just prior to his disastrous, unsuccessful attempt to cross the Continental Divide in winter.

SANGRE DE CRISTO.—President Theodore Roosevelt established the original San Isabel National Forest on April 11, 1902, the area withdrawn being only a small part of the present Sangre de Cristo Division. This division now includes the mountain range of the same name from its northern limit to the abrupt easterly turn of the range, where Sierra Blanco, 14,363 feet in elevation; Old Baldy, 14,125 feet; and several other high peaks stand guard over the great San Luis Valley.

Midway along the northern extension of Sangre de Cristo Range, Kit Carson Peak, 14,100 feet; Humboldt Peak, 14,044 feet; Crestone Needle, 14,191 feet; Crestone Peak, 14,291 feet; and many peaks of lesser height form another group unusually attractive to mountain climbers and lovers of rugged timberline country.

Along the western slope of the range, in the San Luis Valley, lie the Great Sand Dunes, an area of 46,034 acres, which was established as a national monument in 1932. It is a peculiar formation of shifting sands, very colorful and attractive, and may be visited easily over a good road from Alamosa.

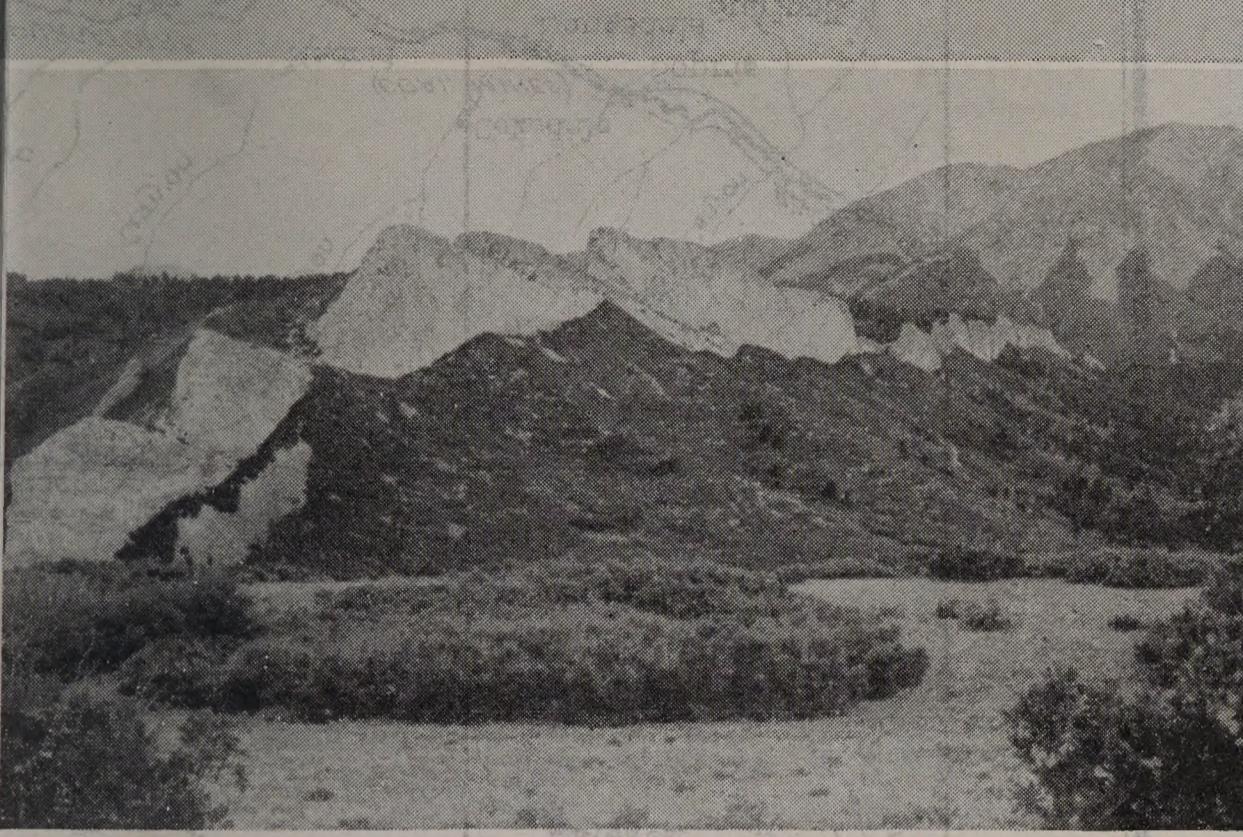
Near the source of Crystal Creek, on the east side of the range, is Marble Cave, a volcanic fissure which has been explored to a depth of 500 feet by forest officers and members of the Colorado Mountain Club. It is an interesting feature, but is undeveloped, because of its location at about 11,000 feet in altitude.

The name Sangre de Cristo, interpreted, is "Blood of Christ," and was given, according to Spanish legend, by Spanish soldiers, who, gazing on the snowcapped peaks tinged to a red glow by the rising sun, murmured in reverential awe, "Sangre de Cristo-Sangre de Cristo."



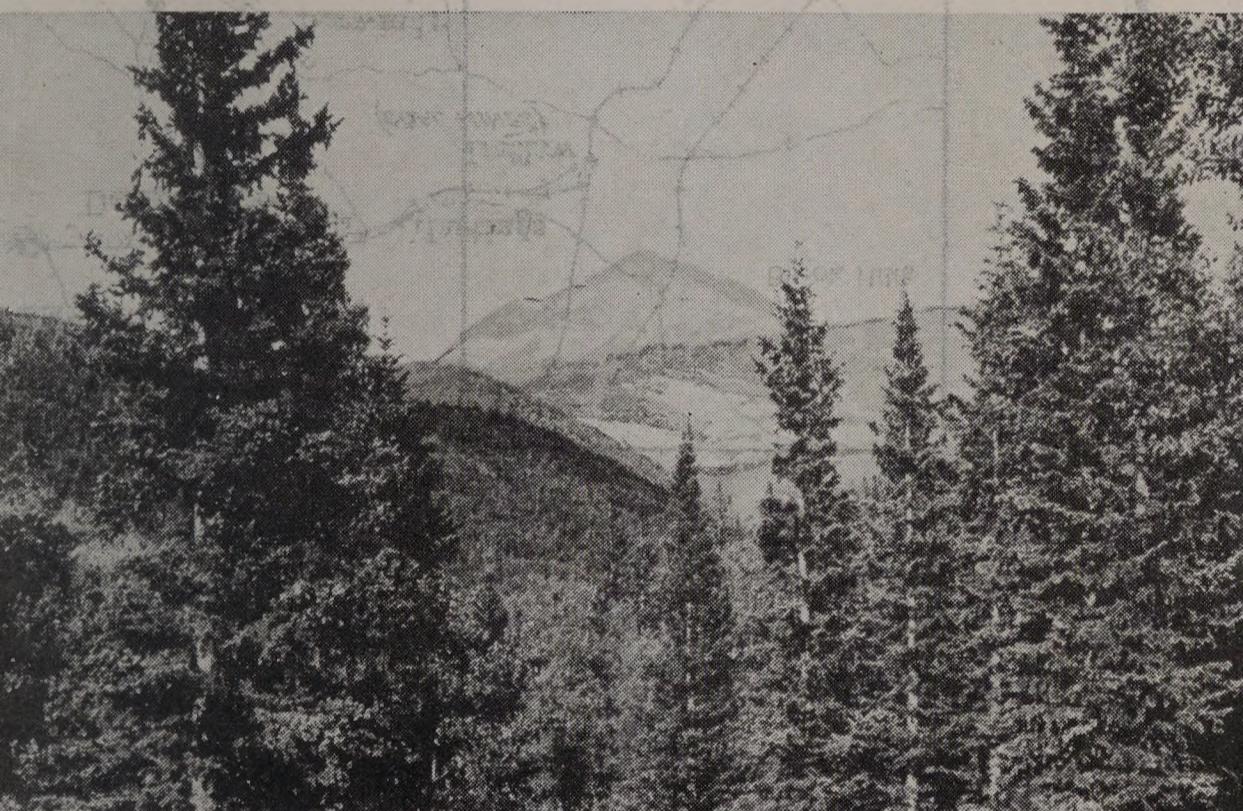
"Kit Carson Signature Rock," near Wetmore, Colo.

History of the Forest



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The "Devil's Stairway," a massive dike extending outward from West Spanish Peak.



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West Spanish Peak from the Blue Lake Road.



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Ranger residence and administration building at Beulah.

WET MOUNTAIN.—The Wet Mountain Division is the most easterly of the three divisions and lies about 35 miles west of Pueblo, where the forest headquarters are located. Its boundaries encompass the Wet Mountains, sometimes called the Greenhorn Range. Because of the close proximity of the area to Pueblo and surrounding communities, it meets their recreational needs admirably.

Parts of the Wet Mountains Forest Reserve were withdrawn from entry in 1891 and 1900, but the proclamation establishing the reserve was not issued until June 12, 1905. The name is attributed to early settlers, who, after crossing the arid plains, saw the heavily-wooded slopes, overhung with rain clouds, and rejoicingly called them the Wet Mountains. The name Greenhorn refers to Chief Cuerno Verde of the Comanche tribe, who suffered defeat in these mountains at the hands of the Spaniard, De Anza.

SPANISH PEAKS.—The Spanish Peaks Division was withdrawn March 1, 1907, and within its boundaries are the Spanish Peaks and the Culebra Mountains. The peaks, rising abruptly from the plains to 12,708 and 13,623 feet in elevation, were important landmarks to early explorers and settlers. Apart from other mountains, their snowcapped crests may be seen for many miles from any direction and must have been a welcome sight to plains-weary travelers.

To the Indians the twin peaks were objects of divinity, for they believed that the rain gods dwelt there and brought forth storm clouds, with their life-giving moisture. The Spaniards called them Huajatella, or "Breasts of the World," thus emphasizing the significance of the Indian belief. "Spanish Peaks" was the name eventually used, because the early American settlers could not readily enunciate the Spanish word "Huajatella."

Our Other National Forests

The Rocky Mountain National Forest Region, in which the San Isabel Forest is located, has headquarters in Denver. Twenty-one forests are included in the regional group, 14 of them in Colorado, 4 in Wyoming, 2 in South Dakota, and 1 in Nebraska.

The national forests in Colorado are:

Arapaho	Montezuma	San Isabel
Cochetopa	Pike	San Juan
Grand Mesa	Rio Grande	Uncompahgre
Gunnison	Roosevelt	White River
Holy Cross	Routt	

A small portion of the La Sal Forest, most of which is in Utah, in the Intermountain Region, extends into Colorado. Including this small tract, the total net area of national-forest land in the State is 13,639,269 acres, or a little more than one-fifth of its total land area.

There are 160 national forests within the United States, distributed through 36 States, Alaska, and Puerto Rico. They contain approximately 176,000,000 acres of public land, and are administered by the Forest Service, U. S. Department of Agriculture.

For economical and effective administration, the national forests are grouped in 10 regions, each with a regional forester in charge.

The national forests were established to protect, use, and perpetuate the many natural resources within their boundaries—soil, water, timber, forage, game, and others of a material or intangible nature. To grow succeeding crops of timber and forage is highly important in the economic development of the Nation, and to preserve a forest and vegetative cover on the watersheds of our public lands is necessary as a preventive measure against erosion and destructive floods. Therefore, the protection, proper use, and perpetuation of the timber and all other natural resources of the national forests for the benefit of all citizens has been the keynote of their administration by the Forest Service.



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Ice carnival at Lake Isabel.



F-397648

The rugged Sangre de Cristos—riding the high trails.



F-222365

Fishing is the hobby of many forest visitors.

Recreati

The San Isabel Forest is a popular recreation center for outdoor enthusiasts of the surrounding cities and towns—Pueblo, Florence, Salida, Canon City, Walsenburg, Trinidad, Westcliffe, La Veta, Alamosa, and many smaller communities. Several of these towns have developed municipal camps for the comfort and convenience of the public, and everywhere in the vicinity of the forest public cooperation with the Forest Service in the construction of recreational facilities has been outstanding.

Wet Mountain Division.

The Lake Isabel Recreation Area and other picnic grounds available in this portion of the forest are located to favor circle trips.

LAKE ISABEL RECREATION AREA.—The beautiful Lake Isabel Recreation Area is 45 miles from Pueblo, via U S 85 and State Highways 165 and 76. This area was developed by the Forest Service and the Civilian Conservation Corps, in cooperation with the public-spirited citizens living in and near the forest. It includes, in addition to excellent picnic facilities, the St. Charles Dam, a modern engineering structure 720 feet long, 117 feet high, and 578 feet through at the base; Lake Isabel, almost 40 acres in extent, offering fishing, bathing, boating, and skating in season; and a ski area used by hundreds of winter sports enthusiasts. Saddle and hiking trips to St. Charles Peak (11,600 feet) and Greenhorn Peak (12,530 feet) are popular.

ORR AND OAK CREEK.—On the Oak Creek road, State Highway 143, 12 to 13 miles from Canon City, or about midway between that point and the junction of the Oak Creek—North Hardscrabble roads.

NORTH CREEK.—Easily reached via the North Creek road, 7 miles north of Beulah.

FLORENCE MUNICIPAL.—20 miles south of Florence. Accessible via State Highway 67 from Florence, or 96 from Pueblo, thence along the South Hardscrabble Creek road, State Highway 274.

PUEBLO MUNICIPAL.—Reached via State Highway 76, 28 miles southwest of Pueblo, is located in scenic Squirrel Creek Canyon. A hike up the Dome Rock Trail to Dome Rock is an interesting side trip.



One of the many picnic grounds developed for use by the public.

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In Areas and Picnic



F-397673

Boating on Lake Isabel.

In 1919, the citizens of Pueblo formed the San Isabel Public Recreational Association, which was the first voluntary organization formed to cooperate with the Forest Service in such development. As a result of that cooperation many serviceable improvements were completed in the Greenhorn Mountains, southwest of the city. Other communities followed Pueblo's example, organized associations and clubs, and helped with funds and public support.

In 1936, when the St. Charles Dam and the proposed Lake Isabel were considered by the Forest Service, the citizens of Pueblo and Rye raised \$10,000 by popular subscription to purchase the land needed for that major development, now known as the Lake Isabel Recreation Area. Purchase of the land was necessary because the site selected for the dam by the engineers was privately owned land, the title to which had to be vested in the Government before the project could be approved.

In addition to the Lake Isabel recreation development, there are 15 other picnic areas, where tables, benches, fire grates, and other simple facilities are provided without charge. These areas are shown on the map, and descriptions, grouped by forest divisions for convenience of forest visitors, follow.

DAVENPORT AND OPHIR.—On U S 85 and State Highways 165 and 76, 53 and 55 miles respectively from Pueblo. Trail to St. Charles Peak, 11,600 feet high and 12 miles distant, begins at the Ophir picnic ground. Good fishing in Ophir and Middle Creeks, which are nearby.

Sangre de Cristo Division.

MOSCA PASS.—On the top of the Sangre de Cristo Divide, 20 miles west of Gardner, via State Highway 150. A favorite camping spot

Take care of your fire and be sure that it is entirely out before you leave. Set a good example for the other fellow. Get the last spark.

Grounds

for deer hunters. From this area one may obtain a view of the Great Sand Dunes, in the San Luis Valley, or one may take the Mosca Pass trail, which passes through the area and leads directly to the dunes.

NORTH CRESTONE.—On forest road, 3 miles north of the town of Crestone, in the San Luis Valley. The only developed forest picnic ground in the entire valley side of the rugged Sangre de Cristo Range. Much used by fishermen and hunters. Many high mountain lakes and tributaries accessible via trail.

HAYDEN CREEK.—On the old sawmill road up Hayden Creek, 4 miles southwest of Coaldale. Fishing in Hayden Creek.

LAKE CREEK.—On the Rainbow Lake—Cloverdale Mines road, 4 miles west of Hillside. From this area one may obtain an excellent view of the Wet Mountain Valley and beyond to Pikes Peak, far in the distance. Fishing in Lake Creek.

ALVARADO.—On the Alpine Lodge—Alvarado Ranger Station road, 10 miles southwest of Westcliffe. Excellent view of the Wet Mountain Valley and Wet Mountain Range. From this area, the circle trip up Comanche Creek and down Venable Creek, over the Phantom Terrace, will give one the thrill of a lifetime. Excellent fishing in all nearby streams and lakes. The hub of the trail system to many of the interesting points in the Sangre de Cristo Range.

Spanish Peaks Division.

SPRING CREEK AND CUCHARA.—On the Cuchara-Stonewall Road, State Highway 111, 12 and 15 miles, respectively, from the town of La Veta.

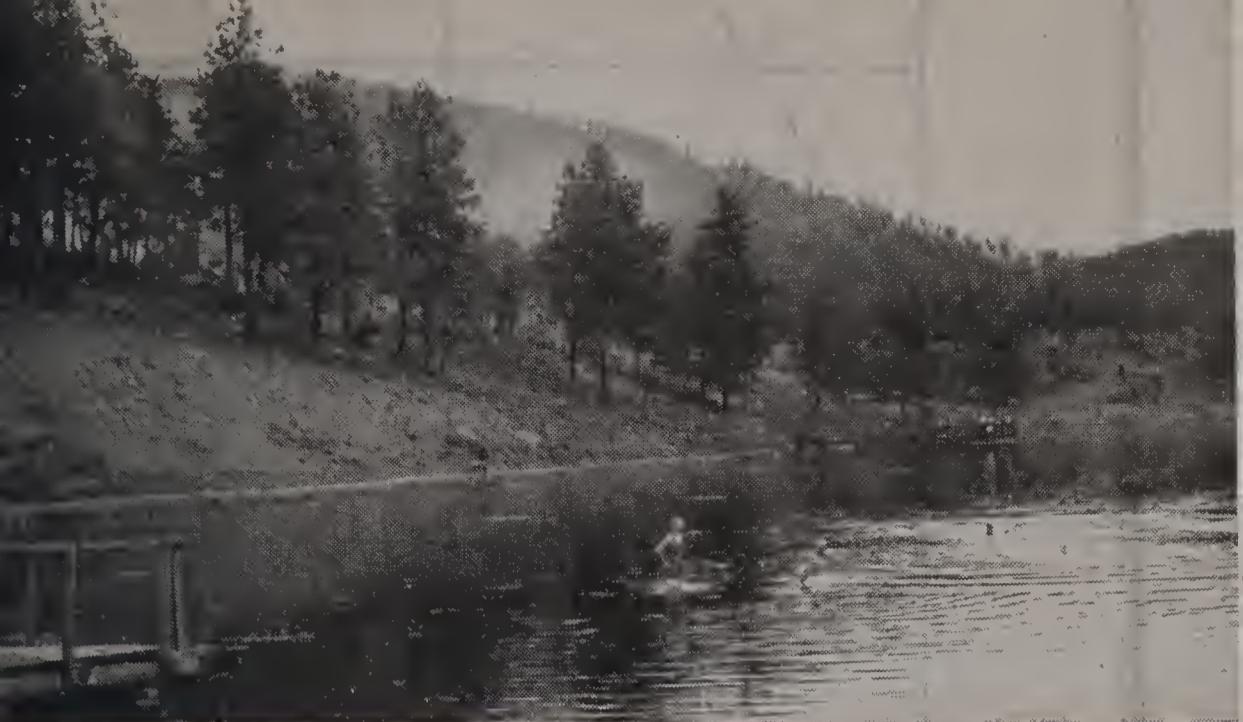
BLUE LAKES.—A 4-mile side trip, on good roads, from the Cuchara picnic ground. Fishing is generally good in Blue Lakes and the Cuchara River. Hiking to Trinchera Peak is a popular pastime.

Meals, lodging, cabins, saddle horses, and other accommodations may be obtained within or adjacent to the forest, at reasonable rates. Forest officers are always glad to furnish information on roads, trails, fishing and hunting areas, forest administration, and also on how each guest may assist in protecting our forested areas.



Riding into the wild high country.

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F-397671

Swimming is the favorite diversion of many visitors.



F-397669

Hiking on forest trails is enjoyed by the whole family.



F-397650

The rugged Sangre de Cristos—resting under the peaks.

San Isabel F

The basic policies of the Forest Service provide for the management of the San Isabel National Forest as an integral part of the general community in which it is located. These management policies are based on the principles of conservation, which provide for the maintenance of the natural resources on a sustained basis. Thus the San Isabel Forest, like a vast storehouse full of supplies, serves materially to stabilize the economic and social structure of the dependent population.

Chief among the various commodities in this storehouse are water, timber, forage, wildlife, and recreation. An adequate supply of water for irrigation is essential to the continued success of the agricultural industry within the upper Arkansas River drainage basin, and much of the flow of this river rises within the San Isabel Forest.

Timber for use in the local coal mines and for construction purposes on ranches, farms, and within the cities is in constant demand. Likewise, the forage resource is a direct complement to the extensive livestock interests of the adjacent San Luis Valley, the Wet Mountain Valley, and similar communities. The ranchmen are directly dependent upon the forest for summer range.

Outdoor recreation is another use that is growing rapidly. Thousands of people annually travel the scenic roads and trails, visit the picnic grounds, fishing waters, and winter sports facilities, or seek recreation in the forest environment.

Twenty-five percent of the total revenue derived from timber sales, grazing, special uses, and other forest activities are returned each year to the counties in which the forest is located, for the use of schools or roads.

Water.

Water is probably the most valuable resource of the San Isabel National Forest. The entire Wet Mountain Valley, all of the Purga-



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Sheep grazing on the San Isabel National Forest.

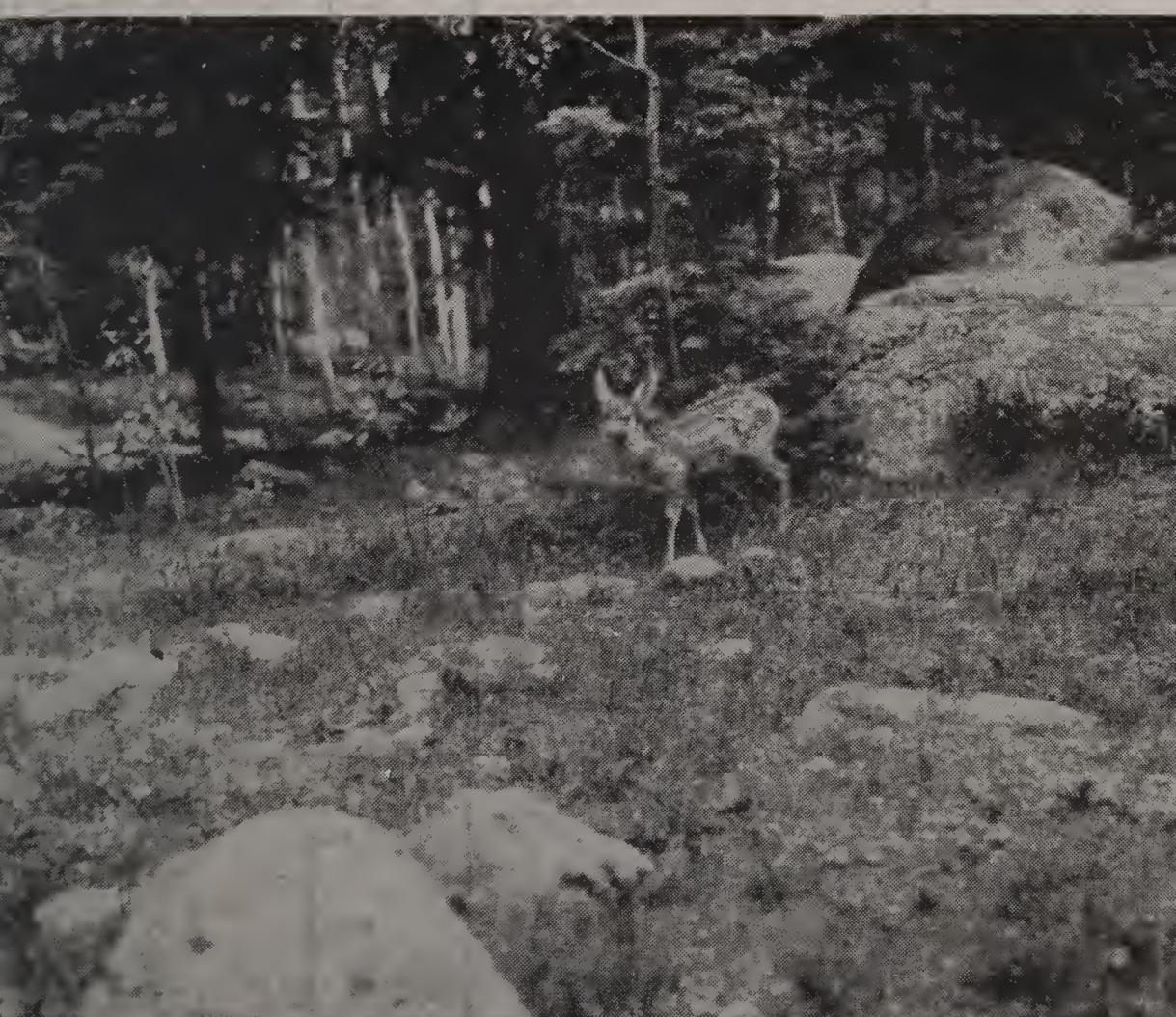
Forest Values

toire Valley, a portion of the San Luis Valley, and a considerable area in the great Arkansas Valley are dependent on water for all uses from the surrounding moist forest slopes and more distant snowclad peaks of the San Isabel National Forest. Without this supply of water, land now tillable would revert to nonproductivity; and physical water improvements, such as dams, conduits, and ditches, costing thousands of dollars, would become worthless. Water management, as a Forest Service activity, consists of the proper manipulation of these areas to obtain a maximum yield of water and a sustained flow at lower stages. This involves problems of maintaining soil conditions favorable to high infiltration capacities and the consequent reduction of surface run-off and erosion. The maintenance of a proper vegetative cover through the coordination of forest uses contributes to the solution of these problems and receives high priority in the administration of the San Isabel Forest.

Timber.

The San Isabel National Forest supports $1\frac{1}{2}$ billion board feet of saw timber, about $\frac{1}{2}$ of which is Engelmann spruce; $\frac{1}{5}$ Douglas-fir; $\frac{1}{8}$ ponderosa pine; $\frac{1}{8}$ alpine, corkbark, and white fir; and the balance of less important commercial species. All species are valuable in the protection of the watersheds, however. Elsewhere in this folder is a list of the more common forest trees and shrubs, which may be of use to those who are interested in their identification.

The average annual cut on the forest is 1,500,000 board feet; which is far less than the total annual growth. Since the timber removed is ordinarily used locally in mines, towns, and on farms and ranches, this plan of cutting no more than the annual growth fits into the economic life of the community and insures a continuous supply of timber to residents of the forest and the adjoining country.



F-406370

Fawn deer on Lake Isabel Recreation Area.



F-26724A

Marking lodgepole pine on snowshoes.

Forage.

Although the San Isabel National Forest is primarily a watershed forest, 8,000 cattle and 17,000 sheep obtain their summer forage from forest range lands. This stock is grazed under paid permits, owned by 160 cattlemen and 25 sheepmen, whose ranch property is dependent on the national-forest range to round out economic ranching operations.

Range management plans for the grazing of stock under permit are prepared by trained forest officers and are discussed with ranchers before stock is taken to the range. They are designed to control the number and movement of stock and to get the best use out of each range without detriment to the basic forage crop and the soil. Game herds are also considered in the plans, and proper allowance is made for them when domestic stock is allotted. The actual handling and salting of stock on the range are the direct responsibilities of the owner, but forest officers cooperate with owners in solving all range problems.

Wildlife.

It is estimated that 3,800 deer, 140 bears, 75 mountain sheep, and 20 head of elk inhabit the forest; and, in addition, there are about 820 beavers, 300 wild turkeys, 900 ptarmigans, 3,000 blue grouse, and numerous other birds and small animals. Each year hunters take 400 deer during the open season, and management of the Game and Fish Commission contemplates insuring to hunters of future generations a sport which we now enjoy.

For the fisherman, the forest offers 256 miles of fishing streams and 49 lakes and reservoirs. Efforts are made to keep the streams, lakes, and reservoirs fully stocked so that good fishing will always be a major forest attraction.

Forest officers and civic organizations assist the Commission in the planting of fish, and forest officers serve as special game wardens to assist the State in game law enforcement and other wildlife activities.

Common Tre

PINES.—Five species. The pines have their needles gathered together at the base in bundles of from two to five. The cones are woody and pendent.

LIMBER PINE (*Pinus flexilis*).—Needles are fine, almost silky, dark green, $1\frac{1}{2}$ to 3 inches long, always in bundles of five. Cones are 3 to 10 inches long, with seeds $\frac{1}{3}$ inch long; scales smooth. Bark is light gray or silvery white, except on old trunks, which are blackish brown and furrowed.

BRISTLECONE PINE (*Pinus aristata*).—Needles grow five in a bundle, about 1 to $1\frac{1}{2}$ inches long, almost always covered with tiny specks of pitch. Cones have sharp bristles on the tips of the scales, which give the tree its name. Sometimes the species is called "foxtail pine" on account of the resemblance of the ends of branches to the tail of a fox. It grows at high altitudes on rocky exposed ridges.

PONDEROSA PINE (*Pinus ponderosa*).—Needles are 4 to 7 inches long, deep green, usually grow three in a bundle but sometimes two, and in tufts at the ends of the branches. Cones are 3 to 6 inches long, and the scales are armed with spines. When young, the bark is dark and the tree is often called "blackjack" or "bull" pine. When older, the bark is yellowish, in thick scales.

LODGEPOLE PINE (*Pinus contorta*).—Needles are 2 to 3 inches long, yellow green, growing in bundles of two. Bark is thin. Cones are one-sided, $1\frac{1}{2}$ to 2 inches long, and cling to the branches for years without opening or dropping their seed. Cone scales are armed with short spines. This species is used mostly for railroad ties, mine props, and telephone poles.

PIÑON OR PIÑON PINE (*Pinus edulis*).—Piñon is confined to the foothills. Needles grow $\frac{3}{4}$ to $1\frac{1}{2}$ inches long, in clusters of two and, rarely, of three. Cones are $1\frac{1}{2}$ inches long and almost as broad. The large seeds are the common piñon nuts of trade.

SPRUCES.—Two species. Needles are scattered over the twigs singly; sharp-pointed, four-sided, leaving twigs rough like a grater when they fall off. Cones are pendant, with parchmentlike scales, falling off the tree whole.

ENGELMANN SPRUCE (*Picea engelmannii*).—The new-growth twigs are covered with soft, short hair. Needles are less rigid and less sharply pointed than those of blue spruce; green, dark blue, or pale steel blue. Cones are 1 to 2 inches long. Bark is dark, reddish brown, and separates in the form of small, rounded scales. Main trunk, in contrast to blue spruce, is smooth and clean.

BLUE SPRUCE (*Picea pungens*).—The new-growth twigs are always smooth. Needles are stiff, with sharp points, varying in color from silvery blue to green. Cones are from $2\frac{1}{2}$ to 5 inches long, averaging twice the length of Engelmann Spruce cones. Bark of mature trunks is gray and deeply furrowed. The main trunk always has numerous short twigs pushing out between branches.

FIRS.—Three species. Needles are blunt, flat, and soft to the touch, without any stem where they join branches; they leave flat, round scars when they fall off, in contrast to short stubs left on twigs by spruce needles. Cones, unlike those of other species, stand erect. In the fall, the cones fall to pieces and leave only spikes on the branch. Buds are blunt and pitchy. Blisters, containing liquid pitch or balsam, are scattered over the smooth bark.

ALPINE FIR (*Abies lasiocarpa*).—Needles are flat, about 1 to $1\frac{3}{4}$ inches long. Needles tend to turn upward. Cones are $2\frac{1}{2}$ to 4 inches long, dark purple. The bark is smooth, grayish white, furrowed only where the tree approaches a foot in diameter. Tree has a sharp, spirelike crown. It usually grows mixed with Engelmann spruce.

WHITE FIR (*Abies concolor*).—Needles are longer than those of alpine fir, often 2 inches or more long. White fir grows at lower altitudes, often with ponderosa pine and Douglas-fir. Its cones are usually larger than those of alpine fir and often grayish green in color. The wood is similar to that of alpine fir.

CORKBARK FIR (*Abies arizonicana*).—The trunk, crown, cones, and needles of the corkbark and alpine firs are so much alike in general appearance that the two cannot be readily distinguished by these features. The cone scales of corkbark fir are of a different form than those of the alpine, and the bracts borne on the backs of the scales

Trees and Shrubs

also differ materially. The ashy-gray, soft, corky trunk bark, alone, readily distinguishes this tree from the alpine fir.

DOUGLAS-FIR (*Pseudotsuga taxifolia*).—Although similar in name, this species has no direct relationship to the true fir. Its leaves are flat, $\frac{3}{4}$ to $1\frac{1}{2}$ inches long, with short stems that join them to the branches. Cones are pendent, with three-pronged bracts protruding from the cone scales. They are persistent and fall off the tree whole. Buds are sharp-pointed, shiny, smooth, red brown.

JUNIPERS.—Two species. The fruit is berrylike, bluish in color. The needles are merely small, green scales attached closely to the twigs, though sometimes spreading and about $\frac{1}{2}$ inch long, making twigs very prickly to the touch. The trees are usually found with piñon and oak.

ROCKY MOUNTAIN JUNIPER (*Juniperus scopulorum*).—The berries are about the size of peas, the bark is scaly, the twigs are slender and graceful, and the heartwood is red. The species is distinguished from the one-seed juniper in that its berry usually has 2 seeds and is bluish or black. The berries mature in 2 years.

ONE-SEED JUNIPER (*Juniperus monosperma*).—The berries are small, mostly less than $\frac{1}{4}$ inch in diameter and usually contain only 1 seed. They are covered with a bluish bloom which may be rubbed off, exposing the true reddish or copper color. Berries of the one-seed juniper require only 1 year to mature. The twigs are stiff and stout; the heartwood is brown.

BROADLEAF TREES

ASPEN (*Populus tremuloides*).—Aspens are commonly called "quaking aspens" or "quakers." The flat, nearly heart-shaped leaves are about 2 inches across; they tremble characteristically in a breeze. The bark is whitish or very pale green, smooth, with black scars where branches have dropped off. The trees rarely grow more than 60 feet high.

PLAINS COTTONWOOD (*Populus sargentii*).—The larger size of the tree and the larger, coarser, more deeply toothed leaves of the cottonwood distinguish this species from the aspen. Also the bark is thicker and more deeply ridged on the main trunk of all but very young trees.

NARROWLEAF COTTONWOOD (*Populus angustifolia*).—This is usually a tall tree, 40 to 60 feet high. The bark is dark gray, heavily ridged half or two-thirds of the way up the tree; above that, smooth, pale green. The leaves are $\frac{1}{2}$ inch to 1 inch wide by 2 or 3 inches long, very similar to willow leaves. The species is usually found along streams at lower elevations.

LANCELEAF COTTONWOOD (*Populus acuminata*).—Although similar to the other cottonwoods in general appearance, this species is usually smaller in size. Leaves are broader than those of narrowleaf cottonwood but much more pointed.

BALSAM POPLAR (*Populus balsamifera*).—This tree is commonly called "Balm of Gilead." It has large resinous buds. Its leaves are dark, lustrous green on their top surface and pale green below. The bark is comparatively smooth but somewhat roughened in old trees, darker than cottonwood. Trees are usually 15 to 30 feet high, occurring in sheltered places on banks of streams, scattered or in small groups.

ROCKY MOUNTAIN MAPLE (*Acer glabrum*).—Usually a shrub, but frequently 20 to 30 feet high, this species has paired opposite buds, sharply lobed leaves, light-gray bark, and paired, winged seed. Its leaves are 1 to 2 inches long, opposite each other.

SCRUB OAK (*Quercus sp.*).—Usually a shrub, rarely more than 15 feet high. Leaves are alternate, smaller at the base than at the ends, with deep lobes; frequently drying on the tree and remaining over winter. The fruit is a short, pointed acorn. The species forms dense thickets at lower elevations. Often valuable for fence posts.

THINLEAF ALDER (*Alnus tenuifolia*).—Grows along and overhanging the streams, usually in clumps, several trees from the same root, frequently 4 to 6 inches in diameter and 15 to 25 feet high. Its leaves are large and sharply double toothed. The mature, seed-bearing fruit is conelike and quite noticeable in winter.

WILLOWS (*Salix sp.*).—This is the common shrub of creek bottoms. Its leaves are usually narrow, sharp-pointed. Some willows attain a diameter of 4 inches and a height of 15 to 25 feet. The buds are covered with a single scale.

WESTERN CHOKECHERRY (*Prunus demissa*).—This is a shrub, 3 to 15 feet high. Flowers and fruit are clustered. Alternate leaves are sharply pointed. Bark, leaves, and seed are bitter to taste. Fruit is black.

WATER BIRCH (*Betula fontinalis*).—The old bark is glossy, reddish-brown and marked by pale-brown longitudinal lenticels which often become 6 to 8 inches long and $\frac{1}{4}$ inch wide. The old twigs are rough, with many hard drops of resin. Seldom more than 25 feet high in Colorado; usually occurs in clumps; and has a graceful, almost delicate appearance.

NEW MEXICO LOCUST (*Robinia neo-mexicana*).—A characteristic locust, usually not exceeding 20 feet in height. Leaves pinnate, with 15 to 21 leaflets on each side of a common petiole. Rose-colored flowers in hanging trusses appear in May. Seed in pods 3 to 4 inches long.

Fire Means Loss . . .

Protect the Forest

Every forest fire means loss of timber, forage, and wildlife, plus the loss of equal or greater intangible values; every fire makes the forest less attractive. The forest visitor is inspired by growing trees, blooming flowers, singing birds, and wild animals. When these disappear, the woodlands lose their charm. Everyone who uses or visits the forest should be a self-constituted fire warden.

From 1909 to the close of 1940, 262 fires burned on the San Isabel destroying forest values on 2,533 acres. Sixty-five percent of these fires were caused by man's carelessness, the remainder by lightning. Lightning fires cannot be prevented, but the more dangerous man-caused fires can be eliminated, and will be when man realizes his individual responsibility in the handling of "smokes" and campfires and learns to put them out. Visitors and users of national forests are urged to observe the Rules for Fire Prevention.

If you find a forest fire, try to put it out. If you cannot put it out, please report it to the forest supervisor, the ranger, the county sheriff, or the nearest telephone operator. The headquarters of the forest supervisor and the rangers are listed in this folder and shown on the map.

Rules for Fire Prevention

1. MATCHES.—Be sure your *match* is *out*. Break it in two before you throw it away.
2. SMOKING.—Be sure that pipe ashes and cigar or cigarette stubs are **DEAD** before throwing them away. Never throw them into brush, leaves, or needles. When in the woods smoke only in places of habitation, at improved campgrounds, or at carefully selected rest and camp sites—never while TRAVELING.
3. MAKING CAMP.—Use fire grates at improved campgrounds and observe the rules for building and extinguishing fires. Before building a campfire at places where no grates are available, scrape away all inflammable material from a place about 4 feet in diameter. Keep your fire *small*. Never build it against trees or logs, or near brush.
4. BREAKING CAMP.—Never break camp until your fire is *out*, *dead out*. Stir the coals while soaking them with water, turn burned sticks and drench both sides. Wet the ground around the fire and be sure the last spark is dead.
5. BONFIRES.—Never build bonfires or burn slash or brush in *windy* weather or while there is the slightest danger that the fire will get away.

